

What Is Claimed Is:

1. A wiring connection device, wherein a substantially cylindrical-shape motor case is mounted on the cylinder block of an engine; the motor stator of an electric motor having an electricity generation function is mounted in this motor case; on the crankshaft of said engine is mounted a rotor mounting member; the motor rotor of said electric motor is mounted on this rotor mounting member; a terminal box, having substantially the shape of a square cylinder and with vertical walls standing integrally, and having an aperture portion directed in the outward radial direction is formed on the outer periphery of the case periphery wall of said motor case; a motor-side through hole, directed in the outward radial direction and which communicates inside and outside of said motor case is formed in the case periphery wall enclosed by said vertical walls; a motor-side connection terminal is mounted on motor-side coil wire drawn out from said motor stator; the motor-side connection terminal is embedded and held by molding within said motor-side through hole; and said motor-side through hole is sealed by means of this molding.

2. The wiring connection device according to claim 1, wherein the inner surfaces of the vertical walls of said terminal box are covered with molding.

3. The wiring connection device according to claim 1, wherein respective motor-side connection terminals are attached to a plurality of motor-side coil wires drawn out from said motor stator; this plurality of motor-side connection terminals is embedded and retained in the

motor-side through hole by means of molding; respective cable-side connection terminals are attached to a plurality of power supply cables, each electrically connected to said plurality of motor-side coil wires; and, insulating portions are formed between said plurality of motor-side connection terminals and between said plurality of cable-side connection terminals, respectively connected to this plurality of motor-side connection terminals.

4. The wiring connection device according to claim 1, wherein said motor-side connection terminal is constituted by a base-side coil wire retaining portion and a tip-side motor-side connecting portion; a motor wire insertion hole, into which the motor-side coil wire is inserted and crimped, is formed in said coil wire retaining portion, directed in the axial direction; a connection screw hole in which is screwed the connection bolt of said motor-side connecting portion is formed, directed in the axial direction; and, a whirl-stop portion, embedded in molding, is formed in said motor-side connecting portion.

5. The wiring connection device according to claim 4, wherein a plating liquid hole is formed in one side in the radial direction of the coil wire retaining portion of said motor-side connection terminal, enabling the inflow of plating liquid into the coil wire insertion hole; and, after plating, the motor-side coil wire is inserted into the coil wire insertion hole, said coil wire retaining portion is crimped from the side in the radial direction opposing the plating liquid hole, so that the motor-side coil wire is attached in the coil

wire retaining portion while being pressed against thereto.

6. The wiring connection device according to claim 1, wherein said cable-side connection terminal is constituted by a base-side cable retaining portion and tip-side cable-side connecting portion; a motor wire insertion hole, in which the core of a power supply cable is inserted and crimped, is formed in said cable retaining portion, directed in the axial direction; and, a connection through hole, through which is passed said connection bolt, is formed in said cable-side connecting portion, directed in a direction intersecting the axis.

7. The wiring connection device according to any of claim 1 through claim 6, wherein motor-side connection terminals are mounted on each of said plurality of motor-side coil wires; this plurality of motor-side connection terminals is embedded and retained in the motor-side through hole, directed in the outward radial direction and arrayed in the circumferential direction, by molding; respective cable-side connection terminals are attached to said plurality of power supply cables, and respective connectors are attached for fastening to said terminal box; a plurality of connector mating holes, and a plurality of connector fastening screw holes paired with this plurality of connector mating holes, are formed in a vertical wall of said terminal box parallel to the arrayed direction of said motor-side connection terminals, directed in directions substantially perpendicular to the axial directions of said respective motor-side connection terminals, and arrayed in the circumferential direction; and, said plurality of connector mating holes and

connector fastening screw holes are arranged such that the angles made by the planes containing each of the axes of the connector fastening screw holes and paired connector mating holes formed in said vertical wall, with each of the motor-side connection surfaces formed at the tips of the motor-side connecting portions of the motor-side connection terminals respectively connected to said plurality of cable-side connection terminals, are each different.

8. The wiring connection device according to any claim 1 through claim 7, wherein said plurality of motor-side connection terminals is embedded and retained by molding within the motor-side through hole, directed in the outward radial direction and arrayed in the circumferential direction; said plurality of cable-side connection terminals is directed from the connector mating holes of a vertical wall of said terminal box to within the terminal box, in directions substantially perpendicular to the axial directions of said respective motor-side connection terminals, and arrayed in the circumferential direction; connectors are mated with said plurality of connector mating holes, respectively, and fastening bolts are screwed into said plurality of connector fastening screw holes, fastening each connector to said vertical wall; the cable-side connecting surfaces of the cable-side connecting portions of said cable-side connection terminals are brought into contact with the motor-side connecting surfaces of the motor-side connecting portions of said motor-side connection terminals; connection bolts passed through the connection through holes of said cable-side connecting portions are screwed into the connection screw holes of said motor-

side connecting portions, and the cable-side connection terminals are connected to said motor-side connection terminals; and, a lid member which blocks said aperture portion at the tip of the vertical walls of said terminal box is mounted in watertight fashion.

0995340-092704